APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/610,689	06/30/2003	Douglas R. Carrell	MSFT-1961/303999.1	2918

41505   7590   09/30/2008
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ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
09/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,14-20,23-29,32,35 and 36* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-11,14-20,23-29,32,35 and 36* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 11, 14 – 20, 23 – 29, 32, 35 and 36 are pending.

2.   This Office Action is in response to communications received 21 August 2008.

Previous objections and rejections not included in this Office Action have been

withdrawn.

Continued Examination Under 37 CFR 1.114

3.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21

August 2008 has been entered.

Response to Arguments

4.   Applicant's arguments filed 21 August 2008 have been fully considered but they

are not persuasive.

5.   Applicant argues Marcos fails to teach first and second objects with the claimed

functionality. However, these objects are taught by the table look up mechanism and

mediating component (col. 4 lines 1 – 19). More specifically, Applicant argues Marcos

fails to teach reading conversion information, which is claimed as functionality of the first

object, and mapping information, which is claimed as functionality of the second object.

However, Marcos teaches the table look up mechanism is used to read conversion

information (col. 4 lines 5 – 7) and the mediating component accesses the mapping

information to enable the necessary conversions for a particular flow control (col. 4 lines

8 – 19).

6.   Applicant argues the complex data structures of Sun are not the same as the

claimed aggregate data types. However, the complex data structure of Sun is

interpreted as an aggregation of primitive data types (col. 25 line 61 – col. 26 line 3). It

is not clear why Applicant believes the claimed aggregate data types differ from the

complex data structures of Sun.

7.   Applicant argues Marcos fails to teach a .TIM file as claimed. However, the

claimed feature is rejected based on its functionality and not the label used to identify it.

Specifically, the .TIM file stores conversion information (see Applicant's specification

¶22, 54). Marcos teaches a file storing conversion information as claimed (col. 4 lines 1

– 19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1 – 6 and 8 – 11 are rejected under 35 U.S.C. 103(a) as being

unpatentable over CTRC (see reference V on PTO-892 mailed 31 August 2007) in view

of Taylor (see PTO-892 mailed 22 August 2006 and 31 August 2007 and 14 November

2007), Coulouris (see PTO-892 mailed 14 November 2007) and Marcos et al. (US

6,347,342 B1; "Marcos").

9.   As to claim 1, CTRC teaches a method of enabling a first system to use a second

system [p.5 ¶4 – p.6 ¶2] comprising:

> generating at the first system, a first request directed to the second

system, said first request being in a form adapted for the first system but not for

the second system [p.5 ¶4 – p.6 ¶2];

> performing a first conversion of said first request to produce a second

request, said second request being in a form adapted for said second system but

not for said first system [p.5 ¶4 – p.6 ¶2];

> invoking the processing of said second request by the second system [p.5

¶4 – p.6 ¶2];

> receiving a first reply from the second system [p.5 ¶4 – p.6 ¶2];

performing a second conversion of said first reply to produce a second

reply that comprises header information that is usable with an Internet protocol

[p.5 ¶4 – p.6 ¶2]; and

providing said second reply to said first system [p.5 ¶4 – p.6 ¶2].

10.   CTRC fails to specifically disclose an FMH7 field of an SNA protocol. However,

Taylor discloses error information comprising an FMH7 field of an SNA protocol [page

68: FMH7]. When combined, the references disclose that said error-handling object

creates header information representative of the contents of said FMH7 field [Taylor:

page 68: FMH7], said header information being adapted for use with a TCP protocol

[CTRC: p.5 ¶4 – p.6 ¶2;Taylor: page 386 ¶ 2, integration of TCP/IP and SNA]. It would

have been obvious to one of ordinary skill in the art at the time Applicant's invention was

made to combine these references because both references disclose providing

communication between different systems, specifically SNA and TCP/IP.

11.   CTRC also fails to specifically disclose a host initiated processing (HIP) system,

listeners, HIP proxies and pre-stored configuration information as claimed. However,

Taylor discloses said first conversion performed using a host initiated processing (HIP)

system that includes one or more listeners for receiving the first request and one or

more HIP proxies that handle flow control for the first conversion [p.138 "proxy"; p.314

¶1; p.909 ¶ for "connection server"]. Furthermore, Coulouris teaches pre-stored

configuration information to limit the number of threads that service requests [p.356 ¶4].

When combined with Taylor, the references teach the number of listeners and HIP

proxies to use in the first conversion is determined by an HIP runtime service based on

pre-stored configuration information. It would have been obvious to one of ordinary skill

in the art at the time Applicant's invention was made to combine these teachings

because Coulouris teaches details of servers that are applicable to CTRC and Taylor.

12.   CTRC fails to specifically disclose the HIP system further including a first object

to read conversion information from a file that explains how to translate data types from

the first system to the second system to a particular flow control and a second object to

access end-to-end mapping information from the file to a particular flow control as

claimed. However, Marcos teaches a first object to read conversion information from a

file that explains how to translate data types from the first system to the second system

to a particular flow control and a second object to access end-to-end mapping

information from the file to a particular flow control [col. 4 lines 1 – 45]. It would have

been obvious to one of ordinary skill in the art at the time Applicant's invention was

made to combine these references because both CTRC and Marcos disclose

integrating different systems by providing communication between otherwise

incompatible communication protocols and systems.

13.   As to claim 2, CTRC discloses that said first request comprises a datum in a first

format, and wherein said act of performing said first conversion comprises converting

said datum to a second format different from said first format, said second request

comprising said datum in said second format [p.5 ¶4 – p.6 ¶2].

14.   As to claim 3, CTRC discloses that said first request comprises a datum having a

first type and wherein said act of performing said first conversion comprises converting

said datum to a second type different from said first type, said second request

comprising said datum in said second type [p.5 ¶4 – p.6 ¶2].

15.   As to claim 4, CTRC discloses that said first type is supported in said first system

but not in said second system [p.5 ¶4 – p.6 ¶2].

16.   As to claim 5, CTRC discloses that said second type differs structurally from said

first type in at least one aspect [p.5 ¶4 – p.6 ¶2].

17.   As to claim 6, CTRC discloses that said first request comprises a call using a first

mechanism to a software object in the second system, and wherein said act of

performing said first conversion comprises converting said call for use with a second

mechanism different from said first mechanism [p.5 ¶4 – p.6 ¶2].

18.   As to claim 8, CTRC discloses that said first request comprises a remote call

according to a first protocol, wherein said second request comprises a remote call

according to a second protocol different from said first protocol, and wherein said act of

performing said first conversion comprises preparing said second request to correspond

substantively with said first request and to work in accordance with said second protocol

[p.5 ¶4 – p.6 ¶2].

19.   As to claim 9, CTRC discloses that said first protocol calls for invocation to be

performed with a bidirectional interaction between a caller and a callee, wherein said

second protocol calls for an invocation to be performed in a unidirectional call message

from said caller to said callee [p.4 ¶5; p.5 ¶4 – p.6 ¶2], and wherein said act of

preparing said second request comprises:

         engaging in an interaction with the caller on the first system to obtain

    information relating to a call [p.5 ¶4 – p.6 ¶2];

         collecting said information [p.5 ¶4 – p.6 ¶2]; and

         preparing said second request using the collected information [p.5 ¶4 –

    p.6 ¶2].

20.   As to claim 10, CTRC discloses said first system is adapted to communicate a

remote call according to a first network protocol, and wherein said first and second

requests, and said first and second replies, are transmitted using a second network

protocol different from said first network protocol, and wherein said acts of performing

first and second conversions comprise: including in said second request and said

second reply header information that corresponds to information that is contained in

requests or replies according to said first protocol [p.5 ¶4 – p.6 ¶2].

21.   As to claim 11, CTRC discloses that said first request comprises a call to a

software object in said second system, and wherein the form of said first request is

adapted for making requests from the first system to a remote system that is of the

same type of environment as the first system [p.5 ¶4 – p.6 ¶2].

22.   Claims 23 – 29, 32, 35 and 36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over CTRC (see reference V on PTO-892 mailed 31 August 2007) in view

of Taylor (see PTO-892 mailed 22 August 2006 and 31 August 2007 and 14 November

2007), Coulouris (see PTO-892 mailed 14 November 2007), Marcos et al. (US

6,347,342 B1; "Marcos") and Sun et al (US 6,442,663 B1; "Sun").

23.   As to claim 23, CTRC teaches a system to enable a first software object in a first

environment to call a second software object in a second environment, the system

comprising:

        hardware comprising at least one processor [inherent];

        a service object that executes on said hardware and that receives a first request

from the first software object, converts the first request into a second request which is in

a form usable by the second software object, and presents the second request to the

second software object [p.5 ¶4 – p.6 ¶2].

24.   CTRC fails to specifically disclose a host initiated processing (HIP) system, listeners, HIP proxies and pre-stored configuration information as claimed. However, Taylor discloses a host initiated processing (HIP) system that includes one or more listeners for receiving the first request and one or more HIP proxies that handle flow control [p.138 "proxy"; p.314 ¶1; p.909 ¶ for "connection server"]. Furthermore, Coulouris teaches pre-stored configuration information to limit the number of threads that service requests [p.356 ¶4]. When combined with Taylor, the references teach the number of listeners and HIP proxies to use in the first conversion is determined by an HIP runtime service based on pre-stored configuration information. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine CTRC and Taylor because both references disclose providing communication between different systems, specifically SNA and TCP/IP. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine Coulouris with CTRC and Taylor because Coulouris teaches details of servers that are applicable to CTRC and Taylor.

25.   CTRC fails to specifically disclose an FMH7 field of an SNA protocol. However, Taylor discloses error information comprising an FMH7 field of an SNA protocol [page 68: FMH7]. When combined, the references disclose an error handling object that executes on said hardware and that receives an indication of an error from the second software object and packages the error into a form usable by the first environment or the first software object, wherein the indication of said error comprises an FMH7 field,

and wherein said error handling object creates header information representative of the contents of said FMH7 field, said header information being adapted for use with an Internet protocol [Taylor: page 68: FMH7; CTRC: p.5 ¶4 – p.6 ¶2;Taylor: page 386 ¶ 2, integration of TCP/IP and SNA].

26.   CTRC fails to specifically disclose a first object to read conversion information from a .TIM file that explains how to translate data types from the first system to the second system to a particular flow control and a second object to access end-to-end mapping information from the .TIM file to a particular flow control as claimed. However, Marcos teaches a first object to read conversion information from a .TIM file that explains how to translate data types from the first system to the second system to a particular flow control and a second object to access end-to-end mapping information from the .TIM file to a particular flow control [col. 4 lines 1 – 45]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these references because both CTRC and Marcos disclose integrating different systems by providing communication between otherwise incompatible communication protocols and systems.

27.   CTRC fails to specifically disclose first and second conversion components as claimed. However, Sun teaches the HIP system further including first and second conversion components, the first conversion component handling conversion issues related to aggregate data types and the second conversion component handling

conversions issues related to primitive data types [col. 25 line 61 – col. 26 line 3]. It would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to combine these teachings because Sun teaches details of data transfer that are applicable to the system disclosed by CTRC.

28.   As to claim 24, CTRC discloses the service object further receives a first reply from the second software object, converts the first reply to a second reply which is in a form usable by the first software object, and provides the second reply to the first software object [p.5 ¶4 – p.6 ¶2].

29.   As to claim 25, CTRC discloses a listener object that executes on said hardware and that detects that a contact regarding the first request has been made by the first software object [p.5 ¶4 – p.6 ¶2].

30.   As to claim 26, CTRC fails to specifically disclose queuing as claimed. However, Taylor discloses a queuing object that executes on said hardware and that queues at least one of connections and requests from the first system [p.44 ¶4 – 5].

31.   As to claim 27, CTRC discloses that the service object comprises a transit object that receives information related to the first request from the first software object and prepares the information into a form that can be used for a call to the second software object [p.5 ¶4 – p.6 ¶2].

32.   As to claim 28, CTRC discloses that the service object comprises an invocation

object that lays out the information prepared by the transit object into a form that can be

used for a call to the second software object, and that uses the laid out information to

invoke the second software object [p.5 ¶4 – p.6 ¶2; p.7 ¶2].

33.   As to claim 29, CTRC fails to specifically disclose a flow control object as

claimed. However, Taylor discloses that the service object comprises a flow control

object that manages the interaction of one or more components involved in the

conversion of the first request into the second request [p.922 "expedited flow"; p.925

"flow control"].

34.   As to claim 32, see the rejection of claims 23, 25, 27 and 28.

35.   As to claims 35 and 36, see the rejection of claims 24 and 23.

36.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over CTRC in

view of Taylor, Coulouris and Marcos as applied to claim 1 above, and further in view of

Lymer et al. (US 6,230,117 B1; hereinafter Lymer).

37.   As to claim 7, CTRC fails to specifically disclose a commarea as claimed.

However, Lymer discloses that said first mechanism comprises a commarea that is

used to pass a call parameter to said object and to receive a result from said object, and

wherein said second mechanism comprises: a first area that is used to pass said call

parameter, or a converted call parameter that corresponds to said call parameter, to

said object; and a second area that is used to receive said result, or a converted result

that corresponds to said result, from said object [Fig. 1; col. 3 line 61 - col. 4 line 4]. It

would have been obvious to one of ordinary skill in the art at the time Applicant's

invention was made to combine these references because both focus on interfacing

between different computing environments.

38.   Claims 14 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Marcos et al. (US 6,347,342 B1; hereinafter Marcos) in view of CTRC (see reference V

on PTO-892 mailed 31 August 2007), Taylor (see PTO-892 mailed 22 August 2006 and

31 August 2007 and 14 November 2007) and Coulouris (see PTO-892 mailed 14

November 2007).

39.   As to claim 14, Marcos discloses a method of enabling a first software object in a

first system to call a second software object in a second system [col. 4 lines 14 - 20],

the method comprising:

        evaluating first information that the first software object exposes when

making a call to a remote system [col. 6 lines 50 - 65];

        evaluating second information that the second software object exposes

when receiving a call from a remote system [col. 7 lines 6 - 43];

generating conversion information descriptive of a process to be followed

in order to convert the first information into a form compatible with the second

information [col. 6 lines 50 - 65; col. 7 lines 6 - 43];

providing the conversion information to a conversion service that uses the

conversion information to convert a first call from the first object into a call in a

form usable by the second object [col. 6 lines 50 - 65; col. 7 lines 6 - 43] and a

first object to read conversion information from a file that explains how to

translate data types from the first system to the second system to a particular

flow control and a second object to access end-to-end mapping information from

the file to a particular flow control [col. 4 lines 1 – 45].

40.   Marcos fails to specifically disclose conversion information describing the

conversion of an FMH7 field into header information usable with an Internet protocol as

claimed. However, CTRC teaches converting a field in an SNA protocol into header

information usable with a TCP protocol [p. 5 ¶4 – p. 6 ¶2]. Furthermore, Taylor teaches

FMH7 as a field in an SNA protocol [p. 68 FMH7]. The combination of Marcos, CTRC

and Taylor teaches conversion information describing the conversion of an FMH7 field

into header information usable with an Internet protocol as claimed.

41.   It would have been obvious to one of ordinary skill in the art at the time

Applicant's invention was made to combine these references because Marcos discloses

providing communication between different systems without restricting the type of

system or protocol, but does provide TCP/IP as a specific example [col. 4 lines 15 - 25;

col. 8 lines 39 - 44] and CTRC and Taylor discloses integration of specific protocols.

42.   Marcos also fails to specifically disclose a host initiated processing (HIP) system,

listeners, HIP proxies and pre-stored configuration information as claimed. However,

Taylor discloses said conversion service using a host initiated processing (HIP) system

that includes one or more listeners for receiving the first request and one or more HIP

proxies that handle flow control for the first conversion [p.138 "proxy"; p.314 ¶1; p.909 ¶

for "connection server"]. Furthermore, Coulouris teaches pre-stored configuration

information to limit the number of threads that service requests [p.356 ¶4]. When

combined with Taylor, the references teach the number of listeners and HIP proxies to

use in the first conversion is determined by an HIP runtime service based on pre-stored

configuration information. It would have been obvious to one of ordinary skill in the art

at the time Applicant's invention was made to combine these teachings because

Coulouris teaches details of servers that are applicable to Marcos and Taylor.

43.   As to claim 15, Marcos discloses that the first information comprises a call

parameter in a first format, wherein the second information comprises a call parameter

in a second format, and wherein the act of generating conversion information comprises

generating code or data that describes how to convert a call parameter from the first

format to the second format [col. 7 lines 6 - 23; col. 17 lines 9 - 21].

44.   As to claim 16, Marcos discloses that the first information comprises a call

parameter of a first data type which is not usable by the second software object [col. 15

line 62 - col. 16 line 4], and wherein the act of generating conversion information

comprises:

> generating a second data type that corresponds to the first data type and
>
> which is usable by the second software object [col. 7 lines 6 - 43];
>
> generating code or data that describes how to convert data of the first data
>
> type to the second data type [col. 7 lines 6 -43].

45.   As to claim 17, Marcos discloses that the first information comprises a return

value in a first form, wherein the second information comprises a return value in a

second form different from said first form, and wherein the act of generating conversion

information comprises generating code or data that describes how to convert data in

said first form to said second form [col. 4 lines 14 - 20; col. 7 lines 6 - 43, 55 - 67].

46.   As to claim 18, Marcos discloses that said first software object makes a call to a

remote system according to a first programming model, wherein said second data

object receives a call from a remote system according to a second programming model,

and wherein the act of generating conversion information comprises generating code or

data that indicates which programming model the first software object uses to make a

remote call [col. 7 lines 24 - 43].

47.   As to claim 19, Marcos discloses that the act of generating conversion

information comprises generating code or data that describes at least one customization

in converting from the first programming model to the second programming model [col.

7 lines 6 - 43].

48.   As to claim 20, Marcos discloses that the act of generating conversion

information comprises generating a transaction initiation message that is used in

invoking the second software object or in reply to the first software object [col. 7 lines 6 -

23; col. 10 line 43 - col. 11 line 14].

Conclusion

49.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to NATHAN PRICE whose telephone number is (571)272-

4196. The examiner can normally be reached on 6:00am - 2:30pm, Monday - Friday.

      If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/   NP
Supervisory Patent Examiner, Art Unit 2195